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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,410	07/18/2003	Gary R. Doyle	BUR920030024US1	1409
30449	7590	10/22/2004	EXAMINER	
SCHMEISER, OLSEN + WATTS SUITE 201 3 LEAR JET LATHAM, NY 12033			DUPUIS, DEREK L	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/604,410	Applicant(s) DOYLE ET AL.	
	Examiner Derek L Dupuis	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 2,4,8,12, and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/18/03 & 7/28/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 40B.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “7” in figure 11 has been used to designate both the active circuits and the slanted edge.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of optic planes including one of an oxide layer and a glass layer (as claimed in claims 6 and 13) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The drawings show the plurality of optic planes including one of an oxide layer or a glass layer, not both as stated in the claim. The specification also discloses one or the other in a single embodiment, not both. In fact, the specification and the drawings use the oxide layer and the glass layer interchangeable as reference number 10.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where

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necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: the reference number 10C in line 14 of paragraph 47 should apparently be "10D". The phrase "a particularly glass layer" in line 4 of paragraph 53 should apparently be "a particular glass layer". The reference numbers 10A, 10B, and 10C in lines 9 and 10 of paragraph 53 should apparently be 9A, 9B, and 9C. The comma between the words "dispersion" and "device" in line 3 of paragraph 56 should apparently be omitted.

Appropriate correction is required.

Claim Objections

6. Claim 2 is objected to because of the following informalities: the phrase "at least wire level" in lines 1 and 2 should apparently be "at least one wire level". Appropriate correction is required.

7. Claim 4 is objected to because of the following informalities: the phrase "said receiver data" in lines 1 and 2 should apparently be "said receiver receives data". Appropriate correction is required.

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8. Claim 8 is objected to because of the following informalities: the phrase “sent received” in line 2 should apparently be “sent and received”. Appropriate correction is required.

9. Claim 12 is objected to because of the following informalities: the phrase “an integrated” in line 1 should apparently be “an integrated circuit”. Appropriate correction is required.

10. Claim 13 is objected to because of the following informalities: the phrase “said plurality of optical” in line 1 should apparently be “said plurality of optical paths”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by *Austin et al. (US 5,200,631)*.

13. With regard to claim 1, Austin teaches an integrated circuit as shown in figure 1 with a plurality of cores (23). Each core has at least one transmitter and at least one receiver for sending and transmitting data on an optical transmission network. The optical transmission network is embedded within the multiple wire layers of the integrated circuit. See line 10 of column 4 to line 67 of column 5.

14. With regard to claims 2-4, 9 and 10, Austin teaches an integrated circuit as discussed above in reference to claim 1. Austin also teaches that the optical transmission network is embedded in more than one wire layer of the integrated circuit. Austin also teaches that the

transmitter and the receivers transmit and send data between two cores. Austin also teaches that each transmitter emits a light of a specified frequency and wavelength and that each received can be tuned to received light of the frequency and wavelength of its corresponding transmitter (see column 4, line 57 to column 5, line 22). Austin also teaches that the transmitters could be light emitting diodes (LED's) (see column 4, line 57 to column 5, line 7).

15. With regard to claim 5, Austin teaches an integrated circuit as discussed above in reference to claim 1. Austin also teaches that the optical transmission network includes two or more optical planes 53, an example of which is shown in figure 3.

16. With regard to claims 6-8, and 11, Austin teaches an integrated circuit as discussed above in reference to claim 5. Austin also teaches that the plurality of optic planes include glass layers.

The applicant uses glass layers and oxide layers interchangeable as reference number 10.

Therefore, the examiner made the assumption based on the specification that the oxide layers and the glass layers are the same (see paragraph 3 in the "drawings" section above). Austin also teaches that the base of the optical planes can be non-reflective (55) (see column 7, line 50 through column 8, line 5). Austin also teaches that data can be sent and received between the optical planes as can be seen in figure 3. Figures 4, 5, and 6 show the use of optical vias in the optical transmission network.

17. With regard to claim 12, Austin teaches a method of transmitting signals within an integrated circuit. Austin provides an integrated circuit as can be seen in figure 1. The integrated circuit includes a plurality of cores and a plurality of optical paths (66, 65, and 72) as shown in figures 1 and 4. An optical path is selectively used for transmission of data (see column 5, lines 46-68).

18. With regard to claims 13-17, Austin teaches a method of transmitting signals within an integrated circuit as discussed above in reference to claim 12. Austin also teaches that the plurality of optic planes include glass layers. The applicant uses glass layers and oxide layers interchangeable as reference number 10. Therefore, the examiner made the assumption based on the specification that the oxide layers and the glass layers are the same (see paragraph 3 in the “drawings” section above). Austin also teaches that the data is sent and received by optical transmitters and optical receivers. Austin also teaches that at one time, the series light beams being propagated can be of different frequencies that correspond to a specific pair of transmitters and receivers. Austin also teaches that the optical signals being emitted are in a range of wavelengths that include the visible and the infrared spectrum which includes wavelengths in the range of 10^{11} Hz to 7.5×10^4 Hz.

19. With regard to claim 18, Austin teaches an integrated circuit with an optical transmission network and a plurality of cores operatively attached to the optical transmission network by transmitters and receivers. Austin also has a plurality of controllers (processors) operatively attached to the optical transmission network and to the plurality of cores by optical transmitters and optical receivers (see column 4, line 10 to column 5, line 68).

20. With regard to claims 19 and 20, Austin teaches an integrated optical circuit as discussed above in reference to claim 18. Austin also teaches that the optical network comprises a plurality of optical planes, an example of which is shown in figure 3. Austin also teaches that the optical controllers (processors) select the optical path from the optical transmission network by selecting a specified transmitter/receiver pair (see column 5, lines 46-68).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek L Dupuis whose telephone number is (571) 272-3101. The examiner can normally be reached on Monday - Friday 8:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Derek L. Dupuis
Examiner
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